

# **Entering Vietnam: A Market Study on Maritime Training Simulators for Image Soft Oy**

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<p>In recent years, Vietnam has witnessed strong growth and remarkable improvement in various sectors such as economics, education and finance. It emerges as a promising market for international companies regardless of size.</p> <p>The thesis aims to investigate the market potential of training simulators in Vietnam for the commissioning company, Image Soft Oy, with the priority in maritime academies. The study also explores the country's maritime education system concentrating on maritime navigation and maritime training. By outlining the theoretical framework, knowledge base and analyzing researched data, results with the main findings and recommendations will be given to the case company with critical thoughts.</p> <p>The theoretical framework and knowledge base developed in this thesis consist of four major branches which explain the process of different research phases fully. Theory on strategic analysis tools in international marketing aims to explore the characteristics of the Vietnamese market, with the emphasis on the maritime sector. The study also examines the competitiveness of the case company. The theoretical background on business-to-business markets provides an understanding of the characteristics of the B2B market, institutional markets, value-added resellers, B2B buying and buyer behavior. Additionally, the thesis includes a knowledge base on the maritime education system in Vietnam and on maritime training simulators.</p> <p>The author conducted this research-based thesis by applying an exploratory research design. The research methods include two phases, secondary research and primary research. Secondary research makes use of secondary data analysis by acquiring data from books, industry articles, publications, and government and administration portals. Meanwhile, primary research is executed during a two-week business trip in Vietnam. It includes eight interviews as a combination of questionnaires, face-to-face interviews, phone calls and Skype interviews made in Finland.</p> <p>The findings from the market research address different issues in the current maritime training simulator market of Vietnam. In brief, there is potential for selling the simulator products of Image Soft to several key maritime academies in the country. The results show that the infrastructure of Vietnamese education is relatively weak and not fully in conformity with international standards. In the meantime, maritime education is striving to integrate with international requirements by 2018. Needs and requirements vary depending on the education missions and objectives of individual academies from vocational colleges to universities. Undoubtedly, the instant business opportunity is found amongst the researched academies. However, the largest obstacles are their limited budget plan and hierarchical administration model.</p> <p>On the other hand, the market appears to include several potential resellers who are interested in selling maritime simulators supplied by Image Soft. Prior to the publication of this thesis, the author also discussed the above findings with the case company in an official presentation following a confidential market report.</p>	
<b>Keywords</b> Maritime training simulator, market research, B2B market, institutional market, Vietnam	

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# **1 Introduction**

This chapter provides the reader with informative explanation of the need of the thesis, concise introduction to the commissioning company and essential benefits bringing to various stakeholders. Simultaneously, the basic key concepts are introduced and enhanced along with the primary research questions and demarcation.

## **1.1 Background**

In the vibrant global economy nowadays, many enterprises are striving for constant development to survive and also to compete against competitors. Internationalization is one of the strategic developments that helps them explore new customers and gain revenue growth. However, there are not only opportunities but also challenges for them, especially small-medium sized enterprises. Hence, having a thorough preparation and conducting a market research are crucial steps before entering the new markets.

Image Soft, a software and high technology company in Finland, is in need of looking for new prospects and planning to enter the Asia-Pacific region. It includes Vietnam as an emerging market. For that reason, the thesis is designed which aims to equip the case company with the better understandings and the overall knowledge of the Vietnamese market. Particularly, the primary focus is on the maritime training simulators and maritime academies as the target customer. The market study will enable the company to assess and benchmark the market attractiveness which affects the decision making process when entering other new markets. The research also gives the case company the chance to re-evaluate its competence and to anticipate potential obstacles arising from different factors. As a consequence, the Vietnamese market study will benefit and strengthen the company's Asia Pacific strategy.

Completing this research-based thesis, the author will develop his professional competence in market research and also get familiar with the business operation within a small enterprise. At once, he will catch opportunities to generate new business relationships, have a closer look at Finnish tech industry and look forward to helping the local enterprises grow internationally.

## 1.2 Case company

Image Soft Oy is a small sized Finnish enterprise which specializes in technology and software development. The company was established in 1990 and has over 25 years of intensive experience in building and developing simulation solutions for various industries. The management board of Image Soft consists of Matti Suuronen (Chief Executive Officer), Ari Niemi (Chief Technology Officer) and Pekka Santanen (Vice President of Sales). Their office locates at Nuijamiestentie 5B, 00400 Helsinki, Finland. (Image Soft 2016.)

In 2015, the company has only nine employees including management members. According to the financial performance data, Image Soft has increased their turnover to €962,000 with 18.40 percent of operating profit in 2013. From 2014 to 2015, their turnover remained at around €520,000 to €550,000 due to the strong priority in research and development activities. (Finder 2016.)

Currently, Image Soft has been focusing on two business sectors: training simulators for maritime academies and technological solutions for underwater surveillance activity (Image Soft 2016). The company has distributed and installed many training simulator systems in various maritime academies in Europe and Asia. Image Soft's maritime training simulators have been certified by the international certification association DNV-GL (Det Norske Veritas and Germanischer Lloyd).

Maritime training simulator is a sophisticated simulation system which combines software and multiple hardware to imitate real-life scenarios regarding maritime activities such as ship navigation, ship rescue, ship engine operation and underwater surveillance. Image Soft solely provides simulation software which is used for both practical and tactical training in maritime colleges and universities. The software can be installed either on desktop computers or authentic ship equipment. In practice, the training simulator allows maritime lecturers to set up exercises and events based on simulation environment. Hence, students will practice and get familiar with different maritime activities through an intuitive and highly realistic display screen.

By using maritime training simulators, maritime academies can provide certified training programs for students in different levels. It ensures safety in practical training, saves cost and time compared to traditional training methods using the expensive authentic ship.

Image Soft has been actively participating in many trade fairs worldwide such as in Hamburg (Germany), Rotterdam (Netherlands), Busan (Korea), Singapore and Florida (USA).

At the moment, the company is striving to enter and assess new market potential in the Pacific Asia region which includes Vietnam as an emerging market.

### **1.3 Thesis topic**

The research topic was chosen in favor of the company needs and it also met the author's field of interest. The thesis objectives are to explore the business opportunity and to assess market potential on maritime training simulator in Vietnam. The study will concentrate on exploiting information and needs from Vietnamese maritime academies which are the company's target customers. Moreover, characteristics of the Vietnamese market, objectives of the education system in maritime academies and position of the case company will also be explored. Hence, conclusion and recommendations will be given before the company decides on entering Vietnam.

The research question can be worded as:

**What is the market potential for maritime training simulator in Vietnam, specifically in maritime academies?**

It was divided into investigative questions (IQ) as follows:

IQ 1. What are the characteristics of Vietnamese market?

IQ 2. What is the competitiveness of Image Soft Oy in the existing market?

IQ 3. How is maritime training simulator used in Vietnamese academies?

IQ 4. How do the academies want to invest in maritime training simulator?

IQ 5. What is the procurement process in Vietnamese academies?

IQ 6. What are the potential resellers?

Investigative questions are designed and allocated in discussion with the commissioning company Image Soft Oy so as to tailor to their demands and the author's point of view. Specifically, IQ1 and IQ2 are generated to explore the market outlook with the most relevant information. IQ3, IQ4, and IQ5 are formed to investigate customer insights and somewhat estimate business opportunity. Meanwhile, IQ6 relates to resellers after the overall understanding of the market, and customer needs are explored. It is placed at the end of the above 5 IQs for it is a subordinate part suggested by Image Soft Oy.

## 1.4 Demarcation

The researched location is Vietnam, which is a part of the company's Pacific Asia strategy. Having a competitive advantage in geographic location and a long coastline, Vietnam emerges as a target market where many key maritime academies locate. Hence, the thesis will include preliminary PESTEL analysis, SWOT analysis, and a brief competition analysis because this is a new market to Image Soft Oy.

Figure 1 below illustrates the demarcation of the market study which somewhat combine market research and marketing research. A brief definition of both terms will be briefly explained in key concepts, section 1.7. For market research result, the author will merely present noteworthy information related to the maritime industry which will benefit the commissioning company the most. Target product of the research are maritime training simulators used in maritime schools, but technical concerns will not be discussed.

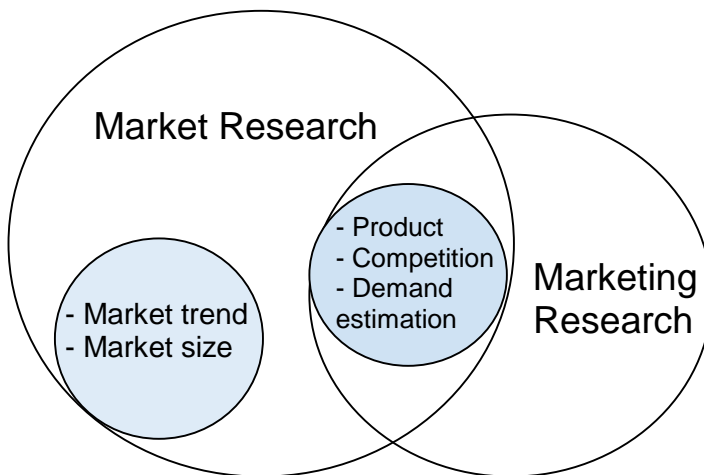


Figure 1. Demarcated elements of the market study.

The theoretical framework of the thesis will not include consumer market but the institutional market and partially reseller market which belongs to business markets. More specifically, Figure 2 depicts the concentration on target audience as schools and reseller. Image Soft serves various clients such as shipping companies, the Navy, training centers and maritime schools. However, the target audience of the company in this research are maritime schools in Vietnam which have marine study program and provide practical training for students.



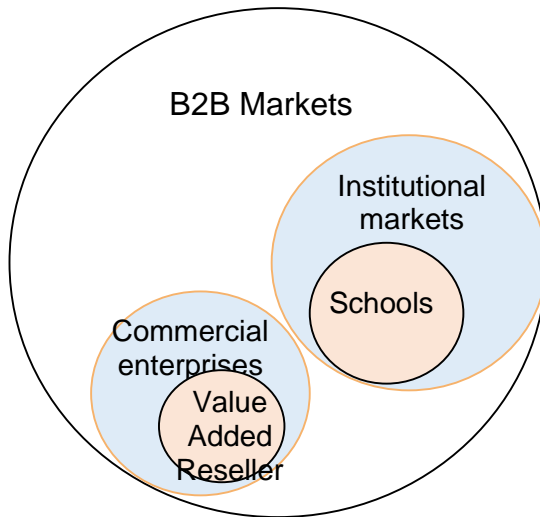


Figure 2. Demarcation of business markets.

The thesis will not aim at private training center nor shipping company which does not have practical training program nor existing maritime training simulator. Other sensitive clients such as naval sector will not be involved since they are big clients whom Image Soft does not want the thesis writer to delve into. As mentioned, the research will include potential resellers as an auxiliary part following maritime institutions which will be attached in the appendix.

The chosen research method is qualitative which will be conducted by doing interviews with representatives from maritime academies. Interviewees will be dean of navigation faculty, maritime lecturer, watch officer and rector. Other lecturers who teach different courses other than maritime or navigation study will not be invited. Face-to-face interview is the most appropriate technique because the research audience is relatively narrow and it is challenging to implement other non-interactive methods. Besides, due to the compound nature of the company's product, face-to-face interview will also help the researcher deepen more into the audience insight by listening to their answers and observing their reaction.

### 1.5 International aspect

Since the thesis will be done for Image Soft Oy, which is originally from Finland and their target market is Vietnam, it completely fulfills the GLOBBA requirement of international aspect. Moreover, the research involved the collaboration with FINPRO Vietnam who also contribute high credibility to the results. Another international aspect is that the case company had distributed their products to many clients in different countries and continents

such as Europe and Asia. Simultaneously, Image Soft also engaged in many international trade shows and is actively communicating with prospects around the world.

## **1.6 Benefits**

By the successful completion of the thesis, it is expected to provide Image Soft with useful information and detailed research results. Hence, the company will be able to achieve sufficient understanding about characteristics of Vietnamese institutional market then they may integrate Vietnam to their Pacific Asia project. Importantly, through the research Image Soft Oy has the chance to gain new prospects, contacts and possibly look for partnership in the future.

On the other hand, the thesis will help the research targets (maritime academies in Vietnam) gain awareness of Image Soft Oy as a potential supplier. The brand offers certified training simulator in high quality and competitive price policy. Through the research, maritime schools will also have a chance to reexamine their training system and speculate on a development plan for the future.

The thesis is anticipated to summarize the Global Customer Relationship Management specialization area of study. Last but not least, the thesis will certainly kick-start the author's career plan. Mainly, it will help the author identify his SWOTs to grow competence, improve limitations and recognize opportunities in marketing research. By conducting this research, it also creates a chance for the writer to generate contacts and widen business network for future collaboration.

## **1.7 Key concepts**

Market research is the systematic collection and interpretation of specific data about the markets, customers, prospective customers, the existing and potential competitors (Robert, Joseph & Waldemar 2011). Different strategy tools will be utilized and applied to collect and analyze market data in compliance with the research context and researcher's choice.

Marketing research is the process of designing, gathering, analyzing, and reporting information that may be used to solve a particular marketing problem such as determining the price or identifying the most efficient marketing channel (Burn & Bush 2014, 34).

Business-to-business markets (B2B markets) consists of all organizations who purchase products or services to use in the creation of their products or services. Their goods and services will be then offered to their customers. (Robert, Joseph & Waldemar 2011, 3.)

Institutional market is a consumer market composed of large buyers who tend to purchase in volume quantities. Several different types of organizations may be involved in a given institutional market, including educational institutions, businesses, and nonprofit organizations. In most instances, the purchases are made to allow the organization to in turn provide services and goods to the individuals they serve. (Malcolm 2015)

Business buyer behavior is how the business buyer will respond to various marketing stimuli. Business buyer behavior looks a lot like the model of consumer buyer behavior, but there are some major differences, especially in the environment of the buying unit, the types of decisions made, and the decision process. (Kotler & Armstrong 2014, 192-193.)

Qualitative research is a research method which involves collecting, analyzing, and interpreting data by observing what people do and say (Burns & Bush 2014, 146).

Maritime academy is a technical school, focused on teaching practical skills which can be put to use in the ocean or industries related to the ocean (Mary 2015).

Maritime training simulator is a sophisticated simulation system which comprises a full set of software and multiple hardware. It imitates real-life maritime activities and is used for practical training in maritime schools. Maritime Lecturers function the training simulator to create exercises so that student can practice on the simulator independently.

## **1.8 Risk analysis**

Potential risks are predicted to appear primarily in the most important process of the research which is data collection. Since the research is qualitative research, many risks may happen in the interview stage.

One of the risks is that the researcher may not be able to reach target academies due to the difference in global time zones, communication barriers, trustworthy or business culture. For examples, email response rate is not as high as the author expected; the questionnaire may not answered via phone calls thoroughly in a limited time; face-to-face interview invitation may be denied. Those obstacles can lengthen the research process

and exceed the anticipated timeline. Unexpected costs may arise such as travel expenses, relationship building fund.

In some cases, the target audience may refuse to answer key questions from the interviewer due to their limited liability, confidentiality policy or they may require more open conversation and relationship to communicate.

## 2 In-depth view of the market study & theoretical framework

This chapter presents the concepts, theoretical framework and knowledge base applied to execute the market research on maritime training simulator in Vietnam. It interprets structured theories and knowledge base in 4 sections: strategic analysis tools, business-to-business markets, Vietnamese maritime education, and maritime training simulators.

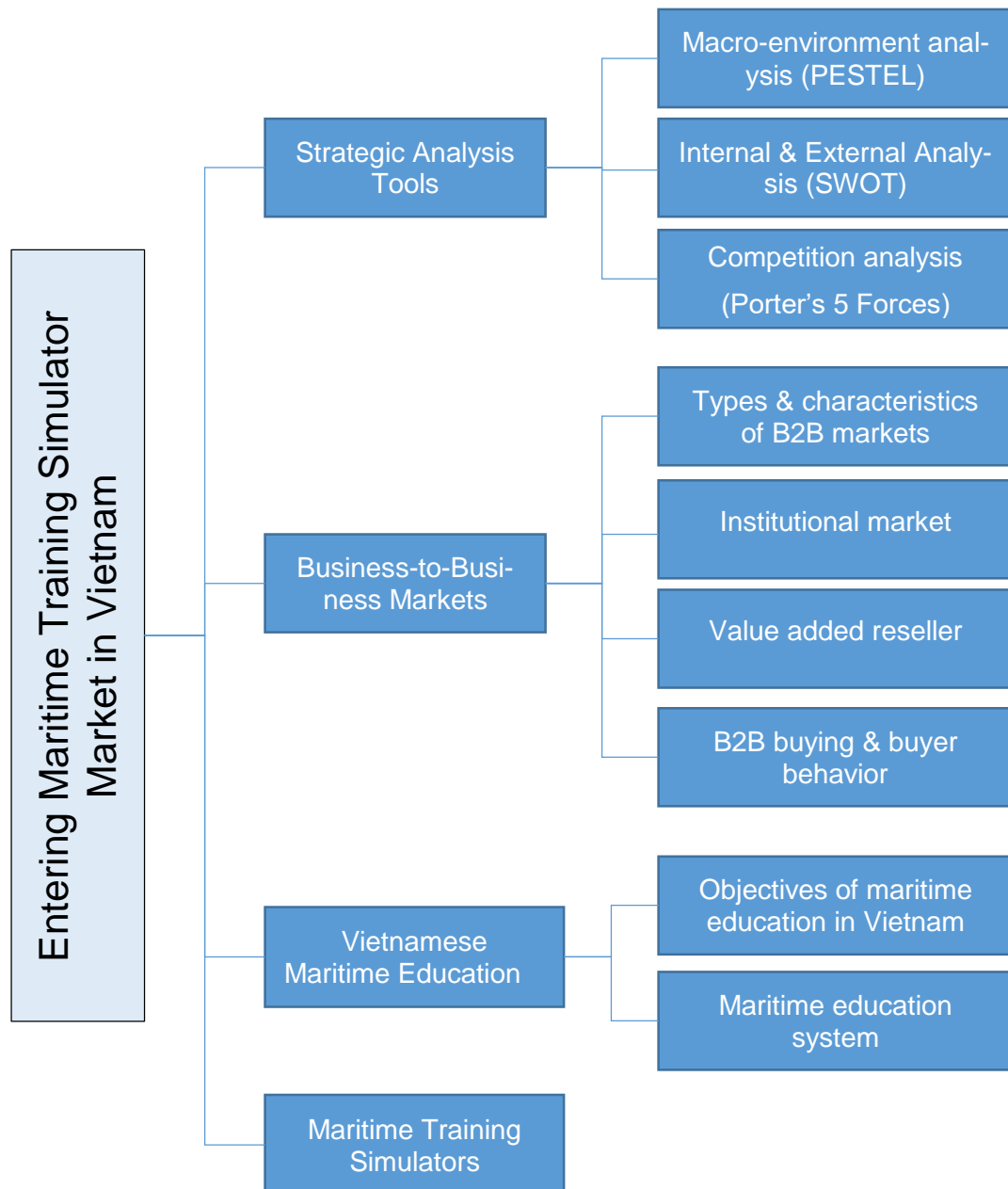


Figure 3. Entering the maritime training simulator market in Vietnam

Firstly, by utilizing knowledge about strategic analysis tools, the author will be able to collect secondary data and prepare ready information to get an overview of the market.

These secondary data practically help answer the first two investigative questions regarding characteristics of Vietnamese market, the competitive position of Image Soft Oy and somewhat identify potential reseller (IQ6). PESTEL analysis, SWOT analysis, and competition analysis are essential strategic analysis tools which are often utilized in any market research. These tools are purposefully chosen after thorough discussion between the author and commissioning company.

The second branch of the theoretical framework is about Business-to-Business markets which provide the author with general understandings regarding characteristics and different types of B2B markets. It is vital to either the author or the reader because the main researched market is the institutional market which also belong to B2B markets. More importantly, organizational buying and buyer behavior will also be explored so as to equip the author with understanding about the buying process in institutions and also be aware of the decision maker behavior. Understanding the theory model of B2B markets, specifically institutional markets, the student can comprehend and fine-tune answer for IQ4 and IQ5.

Coming up next is knowledge base related to Vietnamese maritime education which combines objectives and education system of maritime study in Vietnam. This knowledge base supports the thesis writer being able to see the big picture of the maritime education system in Vietnam, its objectives, and function. In general, this knowledge base will help the author answer IQ3 and IQ4. Equally important, a thorough understanding about maritime training simulator, its features, functions and usage will supply the student with specialized technical terminology about maritime simulator.

The following sub-chapters will discuss the above theoretical framework and knowledge base in more detail. Definitions, references, and thoughts will be demonstrated throughout each section. The author will also give his personal explanation and justification for theories which are used to support solving the research problems.

## **2.1 Strategic analysis tools**

As previously clarified in Chapter 1, the thesis is the combination of market research and marketing research which utilizes different strategy tools to collect and analyze market information needed. The analysis then will be given providing the commissioning company with information about market trend, market size, and company competitiveness. This sub-chapter will depict three key strategic analysis tools which are used to investigate the target market.

“Strategic analysis tools or strategy tools are tools used by companies to implement their strategic plans and achieve a sustained competitive advantage” (Strategic Management Insight 2016). Under an agreement with Image Soft Oy, the three analysis tools are needed in the market study are PESTEL analysis, SWOT analysis, and Porter’s Five Forces analysis.

### 2.1.1 PESTEL analysis

This sub-chapter aims to demonstrate PESTEL as a crucial strategic tool which is widely used for macro-environment analysis. Analysis result from PESTEL will be designed to answer IQ1 regarding the characteristics of Vietnamese market.

PESTEL analysis is a popular tool for identifying different external factors, influences or disciplines that may affect the operation of the organization in an environment. As illustrated in figure 4 below, those factors are Political, Economic, Social, Technological, Legal, and Environmental issues. There are various models for PESTEL analysis such as PEST, STEP, STEEPLE...However, the analyzing methods are identical. (Free Management E-books 2013, 6.)

PESTEL analysis is used for different motives such as when launching new product or service, entering a new region or country, considering a new route to market, working as part of a strategic project team (FME 2013, 8). It is critical to implement PESTEL analysis in this research-based thesis for it helps the organization pinpoint and consider potential impacts from the new market. PESTEL analysis is also made use in combination with SWOT analysis when its external influences transform to opportunities and threats.

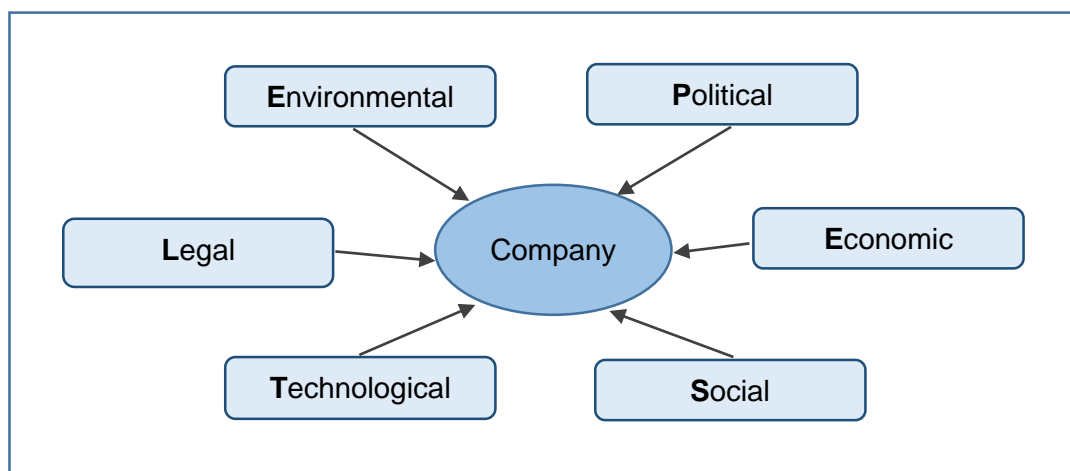


Figure 4. The big picture of PESTEL (Lynch 2012, 83.)

In PESTEL analysis model, political factors refer to governmental stability, bureaucracy, corruption level, tax regulations, employment and operation laws. Economic factors relate to inflation, GDP, GNP, exchange rate, the cost of living, finance and credit, globalization. Meanwhile, Social factors include lifestyle, attitudes and beliefs, social mobility, education, historical issues. Technological issues are research and development, network coverage, quality and pricing, patents and licenses, intellectual property. The list of legal factors may specify taxation, import and export, regulatory bodies, national laws. Lastly, environmental factors are issues related to infrastructure, weather, social implications, geographical location.

Nonetheless, based on the case company's recommendation, PESTEL analysis used in this thesis will not discuss all of the above-detailed aspects. Instead, it only attempts to supply noteworthy information of the Vietnamese market and specifically focuses on remarkable changes or news in the maritime sector, shipbuilding industry, and maritime education.

### 2.1.2 SWOT analysis

Identifying the organization's resources and anticipating obstacles are necessary steps after familiarizing with the target market. One of the strategic tools that emerge beneficially for this research is SWOT analysis which helps answer IQ2.

SWOT is contributed by Kenneth Andrews and has been used as the starting point of the organization before choosing strategic options. Richard Lynch (2012, 300.) describes SWOT as an approach which is used to analyze the organization's internal strengths and weaknesses; and to explore opportunities and threats around the organization. Accordingly, there are two distinctive flows related to SWOT analysis: internal analysis and external analysis. Table 1 below depicts some possible elements which are enclosed in a SWOT analysis.

Table 1. Some elements of SWOT analysis (Lynch 2012, 304.)

INTERNAL Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Core strengths</li> <li>- Low-cost position</li> <li>- Product or service quality</li> <li>...</li> </ul>	<ul style="list-style-type: none"> <li>- Limited finance and resources</li> <li>- Human resources shortage</li> <li>- Low reputation and weak brand identity</li> <li>...</li> </ul>
EXTERNAL Opportunities	Threats
<ul style="list-style-type: none"> <li>- Market growth</li> <li>- Competitor weakness</li> <li>- Change in political or economic environment</li> <li>...</li> </ul>	<ul style="list-style-type: none"> <li>- Low market growth</li> <li>- Economic cycle downturn</li> <li>- Increased competition</li> <li>...</li> </ul>



However, SWOT analysis used in this research-based thesis will pursue the model presented by The Centre for Economic Development, Transport and the Environment in Finland (2015, 9). The commissioning company strongly recommended the author following this SWOT analysis model which is briefly interpreted in table 2 below.

Table 2. International SWOT Analysis Model (The Centre for Economic Development, Transport and the Environment in Finland 2015, 9.)

INTERNAL EXTERNAL	STRENGTHS	WEAKNESSES
	- -	- -
OPPORTUNITIES	Utilise/invest:	Develop/repair:
- -	- -	- -
QUESTION MARKS	Reinforce/assess:	Investigate/assess:
- -	- -	- -
THREATS	Prepare for/ anticipate:	Avoid/prevent:
- -	- -	- -

The above model originally developed by Tulosneuvo Ky in 1999 gives the author a clearer approach to analyzing organization's sources and also planning on what to do next. It is notable that there is one extra section called Question Marks. According to the Centre for Economic Development, Transport and the Environment in Finland (2015, 9), this may refer to cases or factors which organizations lack detailed information to decide whether they are opportunities or threats. Thus, more investigation and assessment are needed. However, the SWOT will be adjusted and simplified accordingly to indicate only the pain points of the case company.

### 2.1.3 Porter's Five Forces analysis

After achieving the overall understanding about the market and recognizing the company's strengths and weaknesses, the following stage is to comprehend competitive environment of the researched market. Hence, it comes to competition analysis with Porter's

five forces model which is designed and developed by Michael E. Porter. However, collected secondary data will be simplified and will not be deepened since this was not importantly emphasized nor prioritized by the commissioning company.

According to Porter's five forces model, the state of competition in an industry is formulated by five important forces from new entrants, suppliers, buyers, substitutes and market competitors (Hollensen 2014, 107). These five forces are clearly illustrated in the figure below.

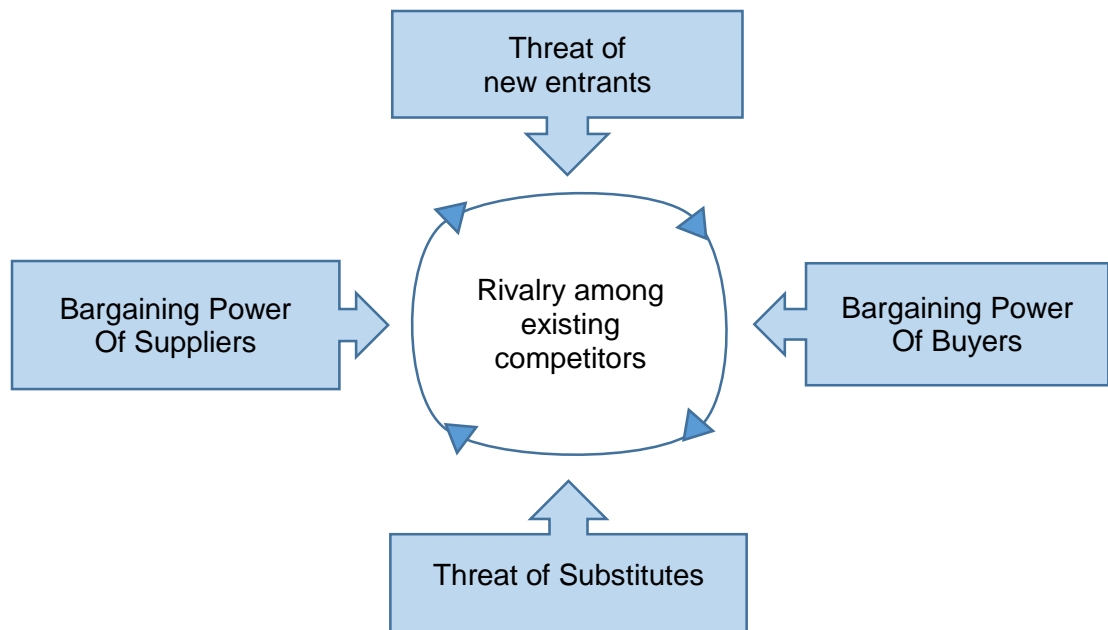


Figure 5. Porter's Five Forces model (Hollensen 2014, 102.)

In Porter's Five Forces analysis, market competitors represent competitiveness level of the existing market based on different elements such as the concentration of the industry (size, number of competitor), the rate of market growth, the structure of cost, switching costs, exit barriers. Supplier factor also impacts on competition level especially when they have high bargaining power. The power of suppliers seems to be high when there are few concentrated suppliers in the market supplying unique products. (Hollensen 2014, 107-108.).

The bargaining power of buyers also influence on competition level. Particularly in the institutional market, buyers earn low or no profits so they are more selective when choosing suppliers. It is common that buyers may have a request for tender or bidder selection in B2B purchases. The bargaining power of buyers is also high when they have standardized purchase which cannot be differentiated while there are many suppliers. Another force is the threat of substitutes when substitute products may reduce market profitability

and attractiveness. The threat of substitutes is high if there are similar prices and various product quality, performance, cost of switching to substitutes is low. (Hollensen 2014, 108-109.)

Lastly, the threats of new entrants may have an impact on the level of competition based on economies of scales, product differentiation, brand identity, access to distribution channels (Hollensen 2014, 109). Brand identity in the case of Image Soft Oy is a more important concern since the company has not had any presence in the area nor significant preferences from customers.

In brief, these three strategic analysis tools are a must in this market research. They not only clarify the market outlook but also help the author elaborate supportive answers for investigative questions in general.

## **2.2 Business-to-business markets**

Following the first theoretical branch regarding strategic analysis tools, it is vital to demonstrate theoretical ground of business-to-business markets (B2B markets) before conducting the actual qualitative research. This chapter will discuss the nature of B2B markets with the fundamental focus on institutional markets and reseller markets. Organizational buying and buyer behavior will also be clarified to give the reader the understanding of how B2B buyer perceives values and proceed to the buying process.

### **2.2.1 Types & Characteristics of business-to-business markets**

Business-to-business markets (B2B markets) consist of producer market, reseller market, government and institutional markets. Producers buy goods and services then transform them into the products, which they sell to their customers to make a profit. Resellers buy finished products and resell them to their customers for the purpose of making a profit. Resellers do not modify the products they buy. Reseller can be whole-seller who sell the product to retailers or retailers who sell products to end user. Meanwhile, government markets buy goods and services to support their operation and do not transform nor resell goods and services to make a profit. Likewise, institutional markets are non-government organizations that buy goods and services to support internal operation. (Study.com 2015.)

However, different marketers may have different market categories or customer segmentation of B2B markets depending on their industry or business environment. There is an-

other classification of B2B markets which is slightly different from the above viewpoint. According to Vitale, Giglierano & Pfoertsch (2011, 31-34), B2B markets are divided into four categories: commercial enterprises, government units, nonprofit and not-for-profit organizations, and producers.

In general, those two concepts of categorization are similar to each other. Particularly, institutional market and nonprofit organizations are notably the same. Nonetheless, Vitale, Giglierano & Pfoertsch (2011, 31-32) have a greater range and detailed definitions for commercial enterprises, instead of merely reseller market presented in John's viewpoint or Kotler & Armstrong's theory. Concisely, a group of commercial enterprises consist of value-added resellers, industrial distributors, original equipment manufacturers and users or end users. The thesis will then specifically discuss institutional markets and value added resellers which belong to commercial enterprises. The minor focus on value added resellers is made based on the commissioning company's preference.

Regarding characteristics of the B2B market, it is relatively comparable to consumer markets. However, it differs from consumer markets by having the typical characteristics as follows. Business-to-business markets comprise fewer but larger buyers coming with much more valuable purchases. Final consumer demand primarily draws business buyer demand, and it fluctuates more quickly. Especially, business markets concern a more professional purchasing effort than consumer markets. (Kotler & Armstrong 2010, 192-193.)

It is true that the business market is much larger and more selective than the consumer market regarding both purchasing value and profession. Image Soft Oy for instance, is a player in B2B markets which has a relatively expensive product portfolio compared to typical consumer goods. Besides, the company's product has a specific professional use for maritime education which not everyone can benefit from the purchase. This assumption conforms to the conclusion of Vitale, Giglierano & Pfoertsch (2011, 9) regarding products in B2B markets, "They can be technically complex, customized to user preference and purchased for other than personal use".

For each type of B2B markets, there are different characteristics of them in relation to buyer behavior and buyer-seller relationship. The following sub-chapters will reveal the emphasized characteristics of institutional markets, and value added resellers only.

### **2.2.2 Characteristics of institutional markets**

Institutional market is one of the integral parts of B2B markets which plays an important role. As target audience of the commissioning company is maritime schools, it is essential to understand how they operate within the institutional market and also acknowledge what constitute to it. This sub-chapter will quickly bring up important characteristics of institutional markets and the author's viewpoints on it.

"Institutional market consists of schools, hospitals, nursing homes, churches, prisons, and other institutions that provide goods and services to people in their care" (Kotler & Armstrong 2014, 202). For example, schools buy furniture and equipment in large quantity to support the teaching and learning for teachers and students; hospitals purchase medical machines and items for their operation. However, institutional markets are deemed to be low budget markets in comparison to other types of B2B markets. It is hindered by hierarchical management style and dependence on the state's investment budget.

Boone & Kurtz (2010, 208) also discuss that some institutions, especially public higher education, must strictly follow regulated procurement formula and process. In fact, it is a common phenomenon of institutional market, typically in emerging countries like Vietnam, where most of the schools or hospitals are subject to the state or their national department. Hence, their operation and buying habits are substantially reliant on public scrutiny and are also identical to the government market. (Vitale, Giglierano & Pfoertsch, 2011, 33.)

Furthermore, many institutional buyers, like hospitals or churches, usually do not prioritize their buying objectives as earning profit. Instead, they pursue as the highest quality of the goods as possible which optimizes their usage. Meanwhile, they still need to stick with their limited budget. Understanding these characteristics, the researcher and the case company will better modify the research survey which tailors to the audience's problem and needs.

### **2.2.3 Characteristics of value-added resellers**

As a small and complementary part beside institutional market, it is necessary to understand what value-added resellers (VARs) do and how they differ from other resellers in the market. Key criteria set for value added reseller will also be presented in this subchapter based on the case company's selection.

As specified by Vitale, Giglierano & Pfoertsch (2011, 33), VARs belong to commercial enterprises which also include distributors, manufacturers, wholesaler, retailers, and users. However, VARs differs from distributors and wholesalers for its unique enrichment to the original products or services.

Value added resellers usually operate within high technology product range and software or hardware solution. This due to the complexity environment of product specification which VARs can add more supportive products or services, hence, resell them as a whole package. Those added values can be marketing activities, group consulting, product use guidance, installation, training and maintenance. For that reason, those resellers often receive an attractive discount package or have rights to buy at wholesale prices.

By using value-added resellers, small and medium sized company from mother country do not have to invest largely in the target foreign markets. Technically, the supplier can easily pass the obligation of marketing and customer relationship management to the local resellers. There is no common agreement for VARs relation, but it varies depending on the negotiation between commissioning company and the chosen VAR on certain activities.

For Image Soft Oy requirement, the company sets certain criteria for selecting value-added resellers for their maritime training simulators. Accordingly, those who wish to become the company's official distributor must fulfill the following requirements:

- Possess relevant IT skills including basic computer knowledge, hands-on configuration, networks and connectivity, and help-desk function;
- Have existing business connections with maritime schools;
- Experience in maritime simulator systems (for example representation of competitors);
- Perform good track record in sales.

(Image Soft Oy 2015.)

The company is still actively looking for authorized distributor operating in the SEA region, even though they have already had several invitations to do a partnership. Having said this, the process of looking for trusted partner is not an easy task, hence, it is vital to comprehend what VARs are and what they can do.

In brief, sub-chapter 2.2.2 and 2.2.3 discuss general characteristics of the institutional market and value-added resellers. The following subchapter will present the B2B buying process and discuss the impacts of business buyer behavior which is noteworthy to learn before the investigation on the target audience starts.

#### 2.2.4 Business-to-business buying and buyer behavior

In order to support and enhance knowledge regarding the target audience, it is a must to explore and learn the B2B buying with the impact of different potential factors on it. This theoretical base will provide the reader with a better understanding of major types of business buying, key participants in B2B buying process and potential influences on it. This will focus specifically on the institutional market where the research will be implemented.

Firstly, it is vital to learn different types of the buying situation so as to anticipate the target audience needs. Kotler & Armstrong (2012, 193) define three main types of business buying which are clearly illustrated in figure 5 below.

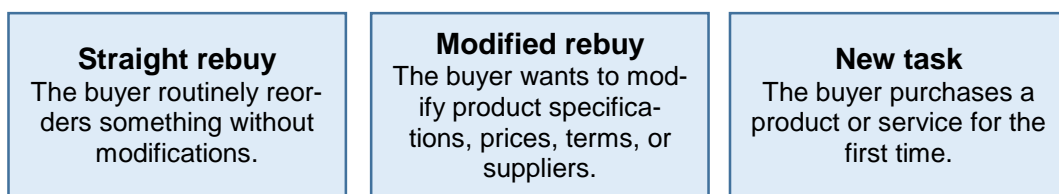


Figure 6. Major types of business buying situations. (Kotler & Armstrong, 2012, 193.)

In the institutional market, straight rebuy can be simple learning and teaching supplies in schools which are updated annually, quarterly or on a routine basis. Meanwhile, modified rebuy is much more typical and related to large-scale investment in the long run. A new task is the buying situation where there is new school established and just started investing. The product or service can relate to new technology or development. In this circumstance, a larger investment and many more participants will get involved in the buying process.

The relationship between sellers and buyers in the context of B2B markets is more professional and more formal than consumer markets. In the business buying process, qualified and professional buyers exist and follow established purchasing policies and procedures. Meanwhile, sellers including their products and services will be evaluated carefully based on buying objectives and criteria. Importantly, there are buying influences, and multiple parties involve in purchase decisions. Thus, B2B buying usually has a negotiation between buyers and sellers in common places.

Knowing which parties involve in the buying process of B2B context is necessary to target at the right person while the value of the purchase is huge and important either to the sellers or the buyers. Key parties in the business buying process are gathered into a group called the buying center. Participants in this buying center are people who can

make a purchasing decision, influence on the buying process, use the buying product or service and be in charge of communication. Kotler & Armstrong (2012, 194) specified those participants in the table below.

Table 3. Participants of the buying center in business buying process. (Kotler & Armstrong 2012, 194.)

<b>Users</b>	Members of the buying organization who will use the purchased product or service.
<b>Influencers</b>	People who can affect the buying decision by helping defining specifications and providing information for evaluating offers.
<b>Buyers</b>	People who make actual purchase.
<b>Deciders</b>	People who have the formal or informal power to choose between options or approve the final providers.
<b>Gatekeepers</b>	People who control the flow of information and communicate to others.

In institutional market, schools and education institutions individually have similar buying center but it must not always a fixed organization. Maritime training simulators as a product for instance, users in the buying center of schools are teachers, lecturers, trainers. Accordingly, influencers are also teachers, head of the faculty, technical staffs, in-house experts or maintenance officers. Buyers are people in the purchasing department; deciders are rector, vice rectors. Gatekeepers are account manager or people from relationship department

Last but not least, there are major influences on business buying, especially on business buyers. Environmental, organizational, interpersonal, and individual factors have different impacts on the business buying process. Vitale, Joseph, and Pfoertsch (2011, 72) stated that some of the influences that shape business buying process may include:

- The characteristics/corporate culture of the firm
- The degree of risk aversion presents in the future
- The reward system in place at the time of decision
- The amount of vertical and horizontal management involvement.

Additionally, some other influences on business buying are the mission, goals, objectives of the organization, policies, regulation, and restrictions.



## **2.3 Vietnamese maritime education**

Since the target audience of the research is maritime academies in Vietnam, it is critical to get acquainted with the education system and explore how maritime education and training are implemented in Vietnam. It is also beneficial for Image Soft because there is the need to acquire more information about Vietnamese maritime education in general. This chapter will provide the reader with objectives of maritime education, the overview of study progress, with various maritime training and study programs required in Vietnam.

### **2.3.1 Objectives of maritime education in Vietnam**

Initially started in the 1950s, maritime education in Vietnam has been becoming one of the most important study fields which constitute remarkably to the maritime industry. It has crucial roles and objectives in supporting maritime economic and providing important human resources for maritime industry.

As indicated by the Prime Minister of Vietnam in 2014, the development plan for human resources in maritime sector is to educate and train 42,000 watch officers and seafarers until 2020 which is also the orientation to 2030. While Vietnam Maritime is going to have 6,000 new managing officers, approximately 9,000 seafarers and maritime technical engineers. (Maritime College No.1 2016.)

Besides, long term implementation for maritime education emphasizes the following objectives:

- Facilitate human resource development in logistics, shipbuilding, seaport and business administration;
  - Innovate education methods, study programs, education standard and maritime training, especially in watch officer and seafarer training;
  - Improve foreign language training and practice;
  - Foster linkages between maritime transport companies and training center.
- (Maritime College No.1 2016.)

In order to achieve those vital objectives, Vietnam maritime education has developed a well-structuralised system and study paths which will be demonstrated in the next sub-chapter.

### **2.3.2 Education system for maritime study in Vietnam**

To better understand how maritime education and training are implemented in Vietnam, this sub-chapter will illustrate and discuss the education system, related governmental

regulations, study progress and different requirements for watch officer attending maritime study.

Maritime academies in Vietnam are state-owned institutions which are governed by Ministry of Transport (MOT), Ministry of Education & Training (MOET) and Vietnam National Maritime Administration (VINAMARINE). In recent years, the education system in Vietnam has been considerably improved and innovated, from colleges to universities and from study programs to training sessions. Meanwhile, maritime education has a specific education and training framework which effectively follow international convention regulated by International Maritime Organization (IMO). Accordingly, Vietnam has officially joined STCW/1978 Convention on 18 March 1991. (Maritime College No.1 2016.)

Maritime education and training in Vietnam offer various specialization tracks such as Navigation, Marine Engineering, Shipbuilding Technology, Maritime Business, Hydraulic Engineering. However, this thesis will only aim to provide study track of Navigation and Marine Engineering for it relates closely to maritime training simulators. Students who choose to study in Navigation or Marine Engineering may become Maritime Officer based on his level of education as depicted in figure 7 below.

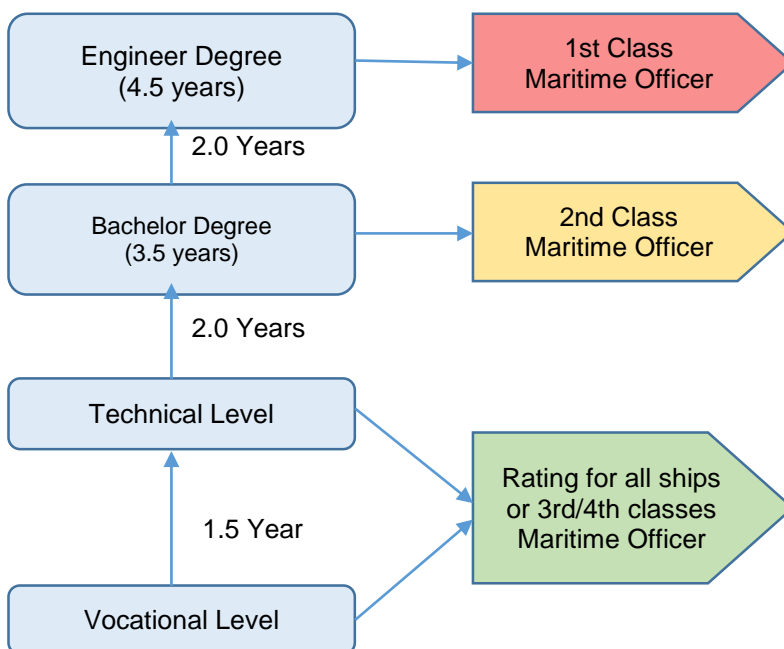


Figure 7. Different study levels for Maritime Officer (Vietnam Maritime University 2015.)

There are four major study levels which consist of Vocational Level, Technical Level, Bachelor Degree and Engineer Degree. For each study level completed, students may achieve different classes of Maritime Officer and can work on ships. A total of four and a

half study years is needed to complete an Engineer Degree, which equals First Class Maritime Officer.

Depending on the student's chosen study track, they will have different training sessions which separated and may vary before or after their professional study year. After the training period, students can achieve official certificates for that training. All certificates must be in compliance with STCW 1978/1995 convention which Vietnam Maritime University (2015) specifies as follows:

- Certificate of expertise;
- Certificate of basic training;
- Certificate of special training;
- Certificate of competence training.

Regarding Marine Officer's competence, maritime universities, and colleges in Vietnam require various competencies and skills when they graduate. They are separated into two levels which are basic knowledge and specialization knowledge. In basic knowledge, the Marine officer should learn and understand maritime safety, the regulations for preventing collisions at sea and trip planning. In the higher knowledge level, officers have specialization in nautical astronomy, marine meteorology, loading and unloading and storage, transportation of goods, dry cargo ships exploitation, bulk cargo, containers, tankers. Marine Captain is also required to learn maritime legislation, use of electric machines, radio, maneuvering in different situations, method handle situations at sea, marine traffic law. (Vietnam Maritime University 2015.)

## **2.4 Maritime training simulators**

Advancement in technology nowadays has enabled new approach and experience to high-quality education. In maritime education particularly, people now can experience a safer training environment yet very intuitive and practical. Maritime training simulators are amongst those innovations which are mandatory for the writer to understand thoroughly when conducting the market research. This section will briefly discuss how maritime training simulators are used in maritime schools and its importance to the education system.

Maritime training simulators are simulation system of various maritime activities used for practical or tactical training in maritime institutions, maritime training centers, and the Navy. It comprises of simulation software and a sophisticated hardware system. Maritime training simulators differ from other training simulators for its training environment largely evolve with sea, rivers, and ports. Characteristic of maritime simulator systems is that it is tech-heavy, expensive and limited used in specific organizations.

Maritime training simulators are designed, named and categorized depending on its use of purpose in training activities. For instance, there are specific training simulators for ship steering, navigation, reading the maritime digital chart (ECDIS), sea rescue, sonar and radar surveillance. Image Soft Oy as an expert in maritime simulation has various simulator products such as full mission bridge simulator, ECDIS simulator, sonar simulator and much more. (Image Soft Oy 2016.)

In maritime schools, maritime training simulators are used by teachers, lecturers or watch officers to set up practical exercises for students and trainee. Hence, the student will get familiar with the operation and gain practical experience in the maritime environment. After graduation, it is also possible for junior deck officer or seafarer to study and train more with different maritime simulators to upgrade their competence and seek jobs.

Nowadays, maritime education follows a common standard set by International Maritime Organization (IMO) and quality must be certified by DNV-GL – an international certification organization. Hence, maritime simulator systems must also comply with requirements from DNV-GL, IMO, specifically in accordance with STCW 78 convention (Standards of Training, Certification, and Watch-keeping). (DNVGL 2016.)

By applying maritime training simulator in education and training, maritime academies do not have to face difficulties in borrowing authentic ships or expensive devices. This ensures safety and convenience in modern training while still provides intuitive scenario display and highly realistic motion in maritime activities. Importantly, maritime simulator systems are securely approved by IMO and DNV-GL so both trainers and trainees can achieve certificates quickly and can seek for jobs globally.

### 3 Research design and methods

This chapter strives to present the author's chosen research design, to illustrate which research methods are used, which data were collected and explain how the collection process went. Furthermore, validity and reliability of the research will also be discussed openly.

#### 3.1 Research design

The thesis is research-based and its objective is to explore the potential of maritime training simulator market in Vietnam. Hence, the research design is exploratory research which is usually used to achieve background information, clarify problems and hypotheses.

The research includes two main phases: secondary research and primary research which are described logically in the flow chart below. The purpose of executing secondary research in phase 1 is to answer IQ1, IQ2, and IQ6. Meanwhile, primary research will answer IQ3, IQ4 and IQ5 by interviewing the target audiences.

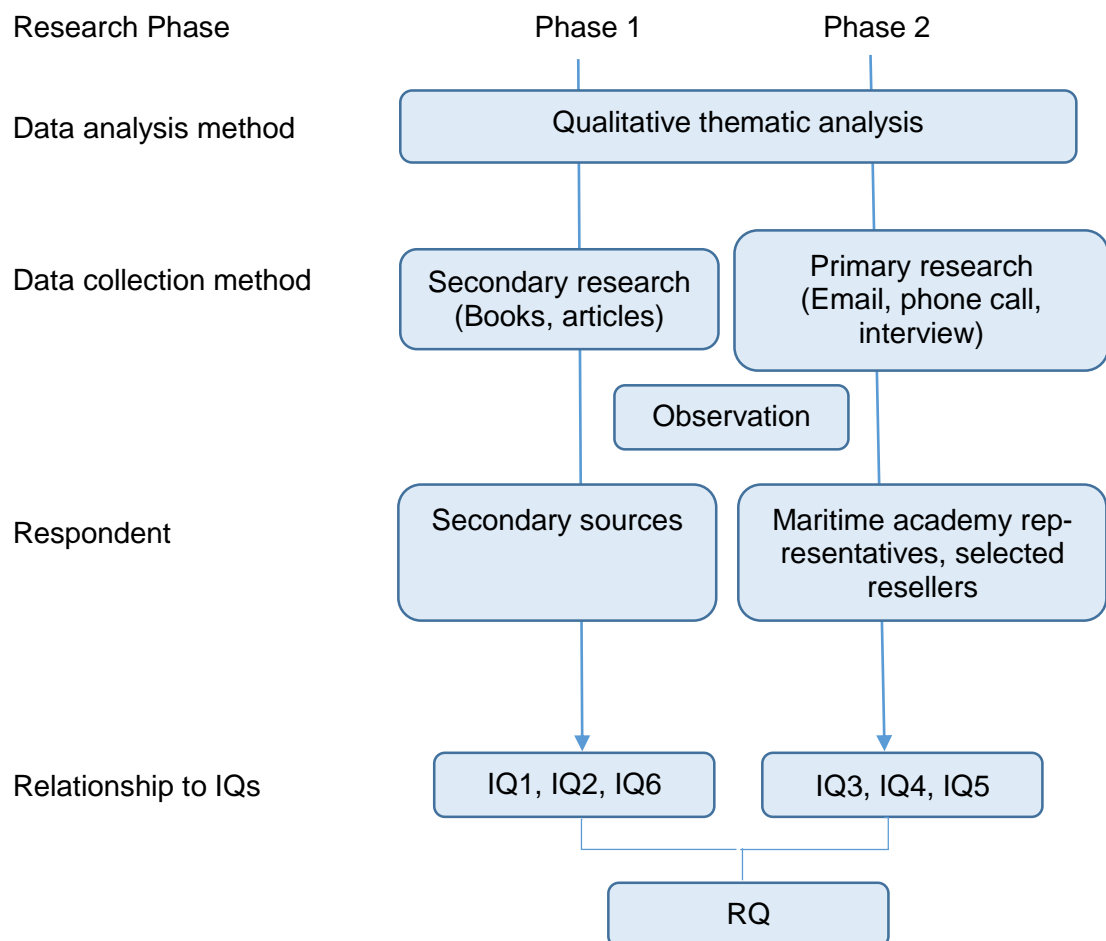


Figure 8. Illustration of the research design

Based on the agreement with the commissioning company and the author's scheduled events, the research is separated into two phases. Phase 1 is for planning, preparing and conducting secondary research primarily through desktop research which will be conducted at the company's office. Scheduled duration for phase 1 is two weeks, calculated for a total of 80 hours which is suggested by Image Soft Oy.

Meanwhile, Phase 2 is designed for primary research which will be allocated in four weeks, approximately 160 hours. In total, estimation time for the market report is 240 work hours. The market report is an integral product to the thesis which supports it well in overall. Timeline and work hour report are also attached in the appendices.

The research design has an emphasis on Phase 2 which is called field research in Vietnam. The initial attempt is to dispatch emails and to create call meetings which are designed to invite informer kindly to the interview. By sending emails, the interviewee will be provided with clarified information and proposal of the commissioning company. Meeting agenda and the main interview theme will be listed so that the informer can anticipate the answer and schedule meeting time.

To increase liability and brand image of a Finnish company, those emails were dispatched with generous help from Finpro Vietnam. However, for some uncertainties, few target interviewee might be reached through phone calls or skype meetings in an appropriate manner.

### **3.2 Research methods**

This subchapter will address the research methods needed for this research-based thesis and also give a thorough explanation of the author's choice.

As mentioned in subchapter 3.1, research method of the first phase is secondary data analysis solely by desktop research and somewhat expert interview. Thanks to the explosion of the internet world, most of the secondary data is now available digitally which can be reached via e-books, online journals, industrial articles, reports and newsletter. By these means, secondary data for a market overview is easily collected. While expert interview aims to provide supportive information from persons who works intensively in the maritime industry, maritime education or has former experience in maritime simulator market.

However this thesis would not complete with only secondary data because the most important findings are from primary data. The chosen approaches for collecting primary data are survey questionnaire and group interview. These two techniques will be conducted simultaneously. The primary reason for choosing these techniques is because the target audiences of the market research solely are institutions and the its volume is relatively small. Mean of data collection in primary research is qualitative research which will be implemented by interviewing and observing representatives of institutions and resellers.

Table 4. Overlay Matrix

<b>Investigative Question</b>	<b>Theoretical Framework/ Knowledge Base</b>	<b>Research Methods</b>	<b>Results (chapter)</b>
IQ 1. What are the characteristics of Vietnamese market?	PESTEL analysis Institutional market Vietnamese maritime education	Desktop research Expert interview	4.1
IQ 2. What is the competitiveness level of Image Soft Oy in the existing market?	SWOT analysis Porter's Five Forces analysis	Desktop research Expert interview	4.2
IQ 3. How is maritime training simulator used in Vietnamese academies?	Maritime training simulator Vietnamese maritime education	Desktop research Survey questionnaire Group interview Observation	4.3
IQ 4. How do academies want to invest in maritime training simulator?	Characteristics of Institutional market	Survey questionnaire Group interview Observation	4.3
IQ 5. What is the procurement process in Vietnamese academies?	Organizational buying and buyer behavior Characteristics of Vietnamese market	Survey questionnaire Group interview Observation	4.3
IQ 6. What are the potential resellers?	Reseller markets	Desktop research Expert interview	4.4

Table 4 displays the overlay matrix for theoretical framework and knowledge based needed to answer investigative questions. Research methods are also applied accordingly to each IQ. Since the research design is exploratory research, there is no structured or reported template to represent answers of IQ3, IQ4, and IQ5. While survey questionnaire is designed by Image Soft Oy and is answered during the group interview, primary information will be gathered and presented in subchapter 4.3, target by target. The next subchapter will discuss in more detail the process of data collection.

### **3.3 Data collection**

This subchapter prevails the data needed for research and also explains why and how to collect them. In general, sources of information are collected in two phases which are secondary research and primary research.

In secondary research, the acquired data primarily are background information of the Vietnamese market, number of maritime academies and also local companies operating in maritime simulators market. These secondary data are easily collected by desktop research, observing industrial news and also through discussions with the case company. Sources for secondary data are from e-books, website of maritime academies, company websites, ministry and government-related publications, industrial magazines and articles, and maritime events in Vietnam. Secondary data is crucial before conducting primary research because it exposes the market outlook and clarifies the right candidates for the interviews.

Primary research or field research is implemented in Vietnam by interviewing representatives of maritime institutions. Data collection techniques such as survey questionnaire, observation, group interview, and expert interview are applied to maximize the exploration of information. Observation means observing informer reaction and behavior while they answer investigative questions but it is not limited to the discussion. Expert interview is a free form and open discussion with persons who work intensively at maritime institutions so as to gain valuable extra information which is not discussed naturally in the formal meetings.

As mentioned previously, the survey questionnaire is designed by the commissioning company with justification of the author, which consists of eight quick questions. The author conducted group interviews and completed the questionnaires during the interview with institution rector, dean of maritime faculty, maritime lecturer, technical engineers and other representatives from maritime academies. In fact, the interview flow was open and it did not follow the order of questions. However, more hidden aspects were explored and expanded. Data is then gathered and manually input in the survey paper instantly. A sample of the survey questionnaires are also attached in Appendix 1.

In secondary research, seven invitation emails were dispatched by FINPRO Vietnam to seven maritime academies and training center. Meanwhile, eight meeting invitations to local maritime companies were sent by the author afterward. Consequently, the author received five acceptances from institutions and three positive responses from local



companies. Agreed time schedule and appointments with the informers are shown in Table 5 below.

Initially, the author prepared a list of eight-teen target organizations which are attached in Appendix 2. Few of them were reached by phone calls, but face-to-face interview were not accepted for the targets showed no interest. Other reasons given by the targets are they do not have budget plan and the offered solution is not simply affordable to them.

Table 5. List of accepted face-to-face meetings in Vietnam

	Target audiences	Appointments
<b>Maritime academies</b>	Ho Chi Minh University of Transport Bui Trong Hung – Deputy Dean of Navigation Faculty	9:30 - 10:30 December 29th 2015
	Waterway Transport Vocational College No.2 Dang Loi – Vice Rector	15:00 - 16:00 December 29th 2015
	Vietnam Maritime University Nguyen Manh Cuong – Dean of Maritime Faculty	9:30 - 10:30 January 4th 2016
	Maritime College No.1 Thai Van Khoa – Head of Navigation Faculty	14:00 - 15:00 January 4th 2016
	VOSCO Maritime Training Center Nguyen Tien Hieu – Vice General Director	14:00 - 15:00 January 5th 2016
<b>Potential resellers</b>	DMT Joint Stock Company Phan Hoang Minh – Managing Director	15:30 - 16:30 January 5th 2016
	Consilium Vietnam Joint Stock Company Nguyen Anh Tuan – Managing Director	14:00 - 15:00 January 7th 2016
	VIETNAV Ltd Nguyen Trung Thanh – Managing Director	Skype interview 15:00 – 16:00 January 23rd 2016

In general, Table 5 interprets primary information of the key informers and scheduled meetings. The informers in the table were given by the institutions when the author received their responses via emails. In fact, each face-to-face meeting had more than two informers and participants. Contact details, titles, names of other informers and meeting locations are attached in appendix 3 and appendix 4.

## **4 Outcomes and key findings**

This chapter presents the key results of the secondary research and primary research after a confidential market report has been delivered to the case company. Each investigative questions indicated in the research design will be answered with key findings and justified results which tailor to interest area of the commissioning company.

### **4.1 Characteristics of Vietnamese market**

This sub-chapter answers the IQ1 by providing essential findings of PESTEL analysis. The scope and content of PESTEL analysis are justified by the commissioning company and the author to provide them with the most relevant information regarding the maritime industry only.

#### **a. Political factors**

Vietnam is a law-governed state where shipbuilding and maritime industry are governed by the Ministry of Transport and Ministry of Industry and Trade. Since February 2016, Vietnam Transport Minister, Mr. Dinh La Thang, moved his work area from Hanoi capital to Ho Chi Minh City, who has been expected to bring more improvements, positive prospect & growth priority to the South of Vietnam. Thanks to his generosity, straightforward attitude and anti-bribery philosophy, the maritime sector in the South is believed to receive promising investments from Transport Department.

However, there is a notable news that Vietnam just received \$1.66 billion non-refundable grant from Japan for maritime safety in 2015 (Koh, C. 2015). Besides, Trans-Pacific Partnership between 12 countries has been agreed and will come into force in 2018 (including USA, Japan, Singapore...) This brings a more open path for high-quality suppliers and sponsors from those countries who are attempting to enter Vietnam.

Regarding tax and tariff, import duties are exempted from goods or service supplied for education and military training purpose in Vietnam. Software's license price must be separated from container hardware (CD, USB, Hard drive). Meanwhile, Value Added Tax is only 5-10% for related hardware imports and is applicable until 2018 if there is no further notice. (Vietnam Customs 2015.)

#### b. Economic factors

Vietnamese maritime industry growth rate is calculated to be 30% per year while shipbuilding industry ranked as the 7th in the world with a gross tonnage of 375,000 (Statista 2014). Throughout the period from 2010 to 2020, the marine economy is expected to be a leading industry with 53-55% contribution to national GDP (Viet Ship 2010). It is prominent that the Shipbuilding Industry Corporation – formerly known as VINASHIN – is on the right track after its shipwreck and debt crisis. There were 33 ships delivered to foreign clients in 2014, amongst 76 ships produced.

On the other hand, the government is also planning to invest \$18-20 billion in various stages until 2020 to improve the seaport infrastructure (Active Shipbuilding Experts' Federation 2015). However, maritime activities have been diminishing in recent years because of the forceful competition from foreign shippers.

#### c. Technological factors

In 2008, Vietnam officially integrated Electronic Chart Display Information System (ECDIS) training to professional training courses and allowed training academies to issue certificates for seamen and watch officer. While Vietnam Maritime Safety is the flagship in developing Electronic Navigational Chart (ENC).

Hi-tech software & hardware are mostly imported from developed countries. However, counterfeit and imitation, especially in software products, are uncontrollable by law in Vietnam. Additionally, seaport and maritime activities still have limitations in uniformity, while administration board usually lacks of long-term development plans which bring many challenges and opportunities to Image Soft.

#### d. Social factors

Business relationships in Vietnam focus on caring and sharing with close personal relationships. Seniority is important, especially between State-owned or government bodies. In Vietnam, the buying trends for hi-tech products in the institutional market often have preference for customizable and affordable features. Within higher education institutions, it is also important to deliver respect and credibility to not only the key decision maker but also other players in the buying center.

e. Environmental factors

Vietnam's coastline is over 3,260 kilometers long, which has 44 seaports including 166 terminals and locates near the major international maritime routes. This is one of the strengths and advantages of the country to foster its maritime sector. Nevertheless, Vietnam is amongst the South-East Asian countries which is very far from Finland. This geographical factor brings Image Soft costly efforts to reach the local customers.

f. Legal factors

In Vietnam, maritime training simulators must have the Certificate of Type Approval which is valid in 5 years provided by Vietnam Register with annual assessments. The Certificate of Type Approval is required for all equipment and devices used in maritime education and training. It is equally important to gain a certificate approved by DNV-GL for class S or class A.

#### **4.2 Image Soft's competitiveness in the Vietnamese market**

This sub-chapter presents the existing maritime simulator suppliers and competitors of Image Soft Oy in Vietnam with brief information. The competitive position of the case company will also be analyzed with the key findings based on the result of the SWOT analysis.

Since 2001, simulation technology in Vietnam Maritime has been experimented and applied to education and training by ODA (Official Direct Investment) from Japan. During the period from 2003 to 2010, many foreign maritime technology companies started selling simulators to Vietnam and set up several authorized distributors. Some of the key existing foreign brands in Vietnam are TRANSAS, FURUNO, Kongsberg, VSTEP, and STC. Most of them are well-known brands who own greater resources and have more senior experience in the industry in comparison with Image Soft Oy.

Besides, there are also important domestic competitors such as Rossmar, Inmatech, and other technical maritime companies. Despite of their limited competence in simulation technology, domestic companies usually have more connections and better relationships with local maritime academies than foreign suppliers. They tend to import sophisticated hardware component and software licenses from foreign brands and then resell as a full set.

Table 2 below indicates the strengths and weaknesses of Image Soft Oy while it also briefly discusses what the company needs to anticipate and avoid in accordance with identified opportunities and threats in the market. Based on the developed model presented by The Centre for Economic Development, Transport and the Environment (2015), the SWOT analysis is adjusted and simplified to indicate the main points only.

The model was suggested by the commissioning company which, in fact, has more detail for the success indicators of the market and the question mark section. However, those parts are only presented in the confidential report for Image Soft Oy. The SWOT analysis in this thesis will only remark the key internal and external factors which may have impacts on the case company.

Table 6. SWOT Analysis of Image Soft Oy in Vietnamese Market

INTERNAL EXTERNAL	STRENGTHS	WEAKNESSES
	<ul style="list-style-type: none"> <li>• Expert in Simulation Tech</li> <li>• Existing connections with APAC area</li> <li>• Flexibility in design &amp; installation</li> <li>• Affordable price</li> </ul>	<ul style="list-style-type: none"> <li>• Weak brand recognition</li> <li>• Limited financial &amp; human resources</li> <li>• Lack of online presence</li> <li>• Geographic location</li> </ul>
OPPORTUNITIES	Utilise/invest:	Develop/repair:
<ul style="list-style-type: none"> <li>• Need for updating software, new simulator</li> </ul>	<ul style="list-style-type: none"> <li>• Actively present company profile and product specification, offer insight selling</li> </ul>	<ul style="list-style-type: none"> <li>• Increase communication &amp; branding, develop online presence, marketing activities (conference, fairs)</li> </ul>
<ul style="list-style-type: none"> <li>• Demand in Full Mission Bridge (Hardware)</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with hardware suppliers in APAC/ Vietnam</li> </ul>	<ul style="list-style-type: none"> <li>• Step-by-step develop product portfolio, outsource hardware components</li> </ul>
<ul style="list-style-type: none"> <li>• Increasing investment for Vietnam Navy</li> </ul>	<ul style="list-style-type: none"> <li>• Officially present Underwater Surveillance Simulator, show off full functions, invest in business meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Improve consultancy services, training session and collaboration.</li> </ul>
<ul style="list-style-type: none"> <li>• Dynamic local resellers</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize existing local networks, exchange values, invest in competence training and create mutual benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Develop communication between both parties &amp; employees (tech department).</li> <li>• Exchange info and knowledge</li> </ul>
THREATS	Prepare for/anticipate:	Avoid/prevent:
<ul style="list-style-type: none"> <li>• Existing competitors from Netherlands, Norway, Japan &amp; distributors</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare for Class A certification</li> <li>• Anticipate for competition in tender contract, price strategy amendment</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid errors in products function</li> </ul>
<ul style="list-style-type: none"> <li>• Low level of education infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare modification and adaptation to the current system, infrastructure, and model.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid unnecessary devices, functions, too high requirements, expectations.</li> </ul>
<ul style="list-style-type: none"> <li>• Bribery in management system</li> </ul>	<ul style="list-style-type: none"> <li>• Anticipate for a pending time, be patient and get to know prospects first.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid straightforward request or subjective assumption</li> </ul>
<ul style="list-style-type: none"> <li>• Maritime industry downturn in Vietnam</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term plan or prepare for the delay in investment.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid too huge investment or too many offers which are costly</li> </ul>

### 4.3 Maritime academies and maritime training simulator in Vietnam

The first two sub-chapters in chapter 4 have brought the outlook of the target market and analyzed its competitiveness level. In this sub-chapter, the author will introduce general information about the maritime academies network in Vietnam.

In general, this sub-chapter aims to present the primary data collected from each maritime academy which helps answer IQ3, IQ4, and IQ5. It includes the academy's objectives, the main study programs, the current simulator environment, and their needs and plan for investments. That information was also illustrated in an official presentation of the market report to the case company on 11 February 2016.

The Vietnamese maritime academy system is separated and located on two different sides of the country, The Northern and The Southern Vietnam, which is clearly illustrated in figure 7 below. The North of Vietnam includes Vietnam Maritime University, Maritime College no.1, Duyen Hai vocational college, Hai Phong Polytechnics College. Meanwhile, Southern of Vietnam comprises Ho Chi Minh City University of Transport and Maritime vocational college no.2.



Figure 7. Vietnamese maritime academies network. (Vietnam Maritime University 2015.)

The thesis investigates four academies and one training center excluding Duyen Hai Vocational, Hai Phong Polytechnics College, and Maritime Vocational College No.2. The final selection was made under agreement with Image Soft Oy before the actual execution of the research and in consideration of the school size, their budget and investment history.

The overall function and assignment of Vietnam maritime academies are to educate and to train students to be Engineer & Bachelor degree for 21 majors which belong to 8 faculties. The education system also has mission to educate up to Master of Science (MSc.) level & Doctor of Philosophy (PhD.) level in Ship Engineering, Maritime Economics, Maritime Safety, Automation Control, Hydraulic Engineering, Electronic Engineering. (Vietnam Maritime University 2015, 7.) However, each maritime academy will have its missions according to its teaching levels and authority which will be described in the following parts.

a. Vietnam Maritime University

Established in 1956, Vietnam Maritime University (VIMARU) has 36 undergraduate majors, 11 majors at master level, eight majors at doctorate level with the total number of 25.959 full-time students. Besides, VIMARU is in charge of training for upgrading and refreshing courses to meet the STCW78/95 requirements of all levels of competent certifications.

Their existing simulator environment is fully equipped and sponsored by Japan. Some of their maritime training simulators are Full Mission Bridge Simulator, RADAR/ARPA Simulator, GMDSS Simulator, Engine Room Simulator, Main Switchboard Simulator, and Steam Turbine Experimental Devices.

Through a quick conversation via phone call with Mr. Nguyen Manh Cuong (Dean of Maritime Faculty), the university has no investment plan in the near future as they have been fully equipped by ODA from Japan and Japanese suppliers. This mean there is no chance for Image Soft to step in.

b. Ho Chi Minh University of Transport (HCM-UT)

Founded in 2001 with over 25 years of development, HCM-UT offers education and training in 28 majors with a focus on Ship Navigation, Marine Engineering, Maritime Electrical and Electronic Engineering, and Shipbuilding Technology. It offers total 2800 study places

per year of which 330 vacancies in Maritime Science following Vietnam Maritime Law and the STCW 78/95 Convention.

The school's current simulation system for the maritime study includes Full Mission Bridge Simulator class A DNV-GL by Kongsberg & STC since 2004, two ECDIS stations, six to seven GMDSS stations supplied by FURUNO in 2001. HCM-UT is also planning to purchase eight ECDIS simulator licenses. However, the university needs two years of preparation starting in 2016.

Based on the interview with Mr. Bui Trong Hung (Deputy Dean of Navigation Faculty), the budget for any investment mostly comes from the Ministry of Transport. The procurement process is identical in every school which includes proposal stage, money grant from Ministry of Transport, and tender auction. HCM-UT can merely prepare a limited budget for its investment which primarily comes from tuition fee.

c. Maritime College No.1

Founded in 2007 and based in Haiphong City, Maritime College No.1 has a training program for regular college, vocational and intermediate associates. Its key professional programs are Ship Navigation, Operation of Marine Engineering, and Waterway Transport Operation and Maintenance. The college provides training quality in compliance with STCW 78/2010 Convention & Vietnam Maritime Law.

Current simulator environment in Maritime College No.1 includes Simulators of Ship Steering, Electrical Charts (ECDIS), Radar and ARPA, which were designed and installed by Vietnamese software company and Naval Academy in 2013. However, their simulators are incomplete standardized nor in compliance with DNV GL's requirements.

Their investment budget also comes from approval of Central Committee and Ministry of Transport. According to Mr. Thai Van Khoa (Head of Marine Faculty), from 2016, the college has an investment plan within one to two years for ECDIS training simulator and GMDSS simulator. ECDIS training simulator is used for electronic chart display system training, while GMDSS simulator is used for maritime safety and ship rescue training.

The college also requested a price list and showcase seminar from Image Soft. This is the hot prospect whom Image Soft should take care of during the period from 2016 to 2017.



d. Waterway Transport Vocational College No.2

Established in 1976, Waterway Transport Vocational College No.2 offers training scheme for vocational and intermediate level. Its main professional studies consist of Maritime Navigation, Waterway Transport Navigation, and Marine Engineering.

The college has a relatively old simulator environment as follows:

- Full Mission Bridge: 2 bridges supplied by Kongsberg since 2005 which is out of warranty
- GMDSS simulator: 1 instructor station & 6 student stations supplied by a Norwegian company.
- Cargo handling simulator
- Engine room simulator: 10 personal computers (PC) provided with basic functions, 4-5 PCs are detected many faults.

Most of the training simulators do not fulfill the requirement of DNV GL-Class A.

Mr. Nguyen Duc Thang (Head of Education Office) and Mr. Dang Loi (Vice Rector) revealed that Waterway Transport Vocational College's budget for investment depends heavily on the Ministry of Transport. Most of their purchases on teaching and training supplies must go through the Ministry. The college also needs a quotation in advance so as to prepare a proposal to the Ministry.

The tender auction will be executed after they are granted permission and budget. The college's long-term plan is to upgrade Bridge Simulator and Engine Room Simulator by 2020. Their short term plan is to invest in Inland Waterway Simulator, which should fall in their individual finance. Business opportunity from this college is also a chance for Image Soft to start looking at their competence and to allocate sufficient resources for new product development.

e. VOSCO Maritime Training Center

Established in 2006 by Vietnam Ocean Shipping Company, VOSCO Maritime Training Center is the biggest and most noticeable individual maritime training center in Vietnam. The center offers training and issues certificates in Mission Bridge HR Management, Engine HR Management, ECDIS, and Ship Safety Management.

Mr. Nguyen Tien Hieu (Vice General Director) has introduced the existing training simulator environment to the author which consists of one Full Mission Bridge Simulator supplied by TRANSAS and one Engine Room Simulator with fifteen stations. Their simulator system is worth \$400,000 investment in 2007. All of their training programs and simulators

are certified by DNV GL in 2009. For the time being, VOSCO has no plan for further investment. Mr. Hieu also revealed that the software system possibly needs updates in more than three years.

In brief, the vital findings from five maritime institutions give Image Soft the outlook of the market which also bring promising opportunities. There are three institutions that Image Soft can get in touch more which consists of Maritime College No.1, Ho Chi Minh University of Transport, and Waterway Vacation College. Instant business opportunity may arise, but the case company need to prepare thoroughly from the approaching phase. This means Image Soft may need support from local companies or value-added resellers whom the author had interesting conversations afterward.

#### **4.4 Potential resellers for maritime training simulator in Vietnam**

This sub-chapter presents key information of the three potential value-added resellers in Vietnam with a brief discussion on their proposals. All three companies are selected in consideration and also based on approachability. Their contact detail regarding address, phone number and email are attached in Appendix 4.

##### **a. DMT Joint Stock Company**

DMT has eight employees and many collaborators from Naval Technical Institute. Their offices are in Haiphong, Da Nang, and Ho Chi Minh City. The company specializes in providing paper & digital products as the following:

- Charts, maritime publications, ECDIS, software manager for ships and many other maritime services.
- Nautical charts & publications for vessels worldwide
- Simulator product: VSTEP Nautis ship simulator software.

Their key partners are Institute of Coastal and Offshore, Rescue and Naval Forces of Vietnam. (DMT JSC 2015).

In the interview, Mr. Phan Hoang Minh (Managing Director of DMT) discussed the opportunity to form a long-term partnership for maritime training simulators. The company is actively keen on helping Image Soft organize an introduction seminar in Haiphong and will also dispatch invitation letter to key parties.

b. Consilium Vietnam JSC

Consilium Vietnam has ten office staffs & 4 technical experts who have senior experience in providing maritime products from Consilium Group. The company has a joint venture with VPMC, which is both located in Hanoi and Ho Chi Minh City. Besides, its important partners are Icomera and Daniamant Electronics. The company's main products include maritime equipment and digital products.

Importantly, Consilium Vietnam has been a close partner of Image Soft Oy in recent years for different naval related projects. This is a strong ground to continue building trust and mutual relationship with Consilium Vietnam. Managing director of Consilium Vietnam, Mr. Nguyen Anh Tuan, has said that he would be glad to be authorized reseller of Image Soft Oy and would go into details after the initial contact.

c. VIETNAV Ltd.

VIETNAV is a small fine company specializing in providing new technology, software, and devices related to maritime activities. The company has three offices in Ho Chi Minh City, Hai Phong, Vung Tau, which are key locations for developing the maritime sector. Their partners vary from small to big players such as Novenco, McMurdo, UT-STC, and Quadrant NEC.

A Skype conversation has been held with Mr. Nguyen Trung Thanh (Managing Director of VIETNAV) and Mr. Kiet (Vice Managing Director) after the author returned from Vietnam. Two representatives of VIETNAV warmly welcomed Image Soft Oy and wished to learn more about the company's products. Furthermore, the discussion was widespread to sharing the outlook of Vietnamese market, identifying obstacles and difficulties when doing business in Vietnam.

The above three potential value-added resellers close chapter 4 with positive market signs for Image Soft Oy. In the last chapter, the author will give his personal comments and discussion on the research result.

## 5 Discussion

In this final chapter, the author will present the fundamental findings of the market research in Vietnam. He will propose recommendations for the case company and also discuss the reliability of the thesis. Furthermore, it is also important to highlight the author's reflection on learning.

### 5.1 Vietnamese market outlook focused on training simulator market

Vietnam recently has been growing as an emerging market where many foreign companies find its potential growth in economics, education and other key industries. Amongst, maritime education in Vietnam has experienced various ups and downs in the process of innovation and development which in fact brings a lot of opportunities for foreign SMEs. The thesis has been done for Image Soft in the era of strong global integration which gives them many key findings.

Firstly, the result from secondary research reveals that institutional market in Vietnam is heavily dependent on states and government administration. Business relationships in Vietnam, particularly within higher education institutions, are a hierarchical structure which requires time to get acquainted. Education and training infrastructure in Vietnam does not fully meet international requirements while the country is striving to make substantial improvements till 2018.

Secondly, regarding competition level in the Vietnamese market, the four big suppliers for maritime training simulators are TRANSAS (Ireland), Kongsberg (Norway), VSTEP and STC (Netherlands). As already mentioned in subchapter 4.2, they all have entered Vietnam throughout the period from 2003 to 2010. Besides, there are also few small suppliers from Japan and Singapore attempting to connect with Vietnamese maritime institutions in recent years. However, there are still rooms for Image Soft Oy because of its competitive price policy and advancement in computer-based training simulators.

Thirdly, IQ3, IQ4, and IQ5 are investigated under a two-week business trip in Vietnam which deliver critical findings to the case company successfully. Maritime training simulators are used periodically during the study progress at academies. The most used training simulators are full mission bridge simulator and engine room simulator while there is no desktop-based ECDIS simulator. Maritime academies in Vietnam have different simulation environment based on their education and training objectives. Therefore, their needs for investment differ from each other which are presented individually in subchapter 4.3. On

the other hand, their buying behavior and procurement processes are identical. They are all reliant on hierarchical administration, and it takes at least 1 to 2 years for preparation.

Lastly, resellers market in Vietnam is heavily specialized in providing hardware and marine equipment but software. There is a shortage of human resource in simulation software market. However, contacted local maritime companies who are listed in subchapter 4.4 are greatly interested and keen on partnering with Image Soft Oy. They have a firm relationship with local maritime academies and clients in the naval sector. Due to the confidentiality of the market report, details of their proposals were only given in the face-to-face presentation with the case company. Cover of the report is attached in Appendix 5.

In brief, the market outlook of Vietnam for the time being seems bright, but it needs time to bloom. Difficulties in maritime academies such as limited budget plan, low infrastructures and hierarchical in administration may hinder Image Soft in reaching out to new prospects. However, there are opportunities to catch and assignment to do which the author will discuss in the following subchapter.

## **5.2 Recommendations**

In this subchapter, the author will interpret his recommendations after intensively analyze the data collection from both primary and secondary research. The recommendation consists of assignment to prepare and efforts which the company may take in the future.

Before officially entering the Vietnamese market, Image Soft should prepare and improve lots of the shortages as the following:

- Prepare product portfolio and function description in more detail (translation needed) which should cover many concerns. For instance, what kind of activities that instructor and trainees can do, how many ships, ports, radar and chart types can be integrated.
- Showcase video and software sample because the more information we reveal, the more trustworthy and credibility we gain.
- Anticipate market needs in various maritime simulators such as Inland Waterway Simulator, Dynamic Positioning (DP) Simulator, Engine Room Simulator.
- Consider collaboration with Consilium Vietnam and VMPC in future projects, locally focused in Southern Vietnam.
- Be patient for delay time in buying decision process but should not be silent. Incidence shows that many projects in Vietnam need time to be reviewed and processed.

Furthermore, there are next steps that Image Soft can perform so as to increase its brand recognition and competitiveness in Vietnam such as:

- Increase online presence and information exposures to showcase our strengths and expertise.
- Create a communication and rebranding plan, develop marketing channels.
- Select and train an authorized reseller such as VietNav and DMT, while Consilium Vietnam JSC would be a strategic collaborator in the naval sector.
- Actively exchange information and values with local businesses, and utilize their networks and market understandings.
- Arrange official visits to maritime academies and naval units under careful selection.
- Pay close attention to the following warm prospects: Maritime College No.1, Waterway Transport Vocational College No.2, Naval Technical Institute.

Additionally, Image Soft Oy may consider participating in the upcoming maritime fairs and exhibitions in Vietnam. Two of the most promising events are 8th International Exhibition on Shipbuilding and INMEX Vietnam 2017.

The 8th International Exhibition on Shipbuilding is the earliest event which takes place from 24 - 26 February 2016 Hanoi, Vietnam. Since 2002, it is the largest and longest established exhibition in Vietnam showcasing all major sectors of Shipbuilding, Shipping and Offshore Technology. Participants include shipowners, manufacturers, material and equipment suppliers, experts, researchers, consultants, leaders and staff working on trading and technology from enterprises in the industry. (Viet Ship 2016.)

The exhibition of INMEX Vietnam 2017 will take place from 29 to 31 March 2017 in Ho Chi Minh City, Vietnam. It is the 6th Edition of the Leading & Definitive International Maritime Expo in Vietnam and Indochina. In 2015, it had 620 participating companies and brands while there were 7,122 Visitors. (Maritime Show 2016.)

### **5.3 Reliability**

When conducting market research, the reliability of the result is vital to determine whether the research has credibility and brings added values to the reader. In this subchapter, the author will give his critical sources of the research, key informers, supervisors and collaborators throughout the research process.

Firstly, the research plan including research questions, research methods, and tools, project timeline, was prepared exhaustively under an agreement with the commissioning

company, Image Soft Oy. The research process is supervised closely by Pekka Santanen (Vice President of Sales at Image Soft Oy). Pekka also supervised the author's internship period at company. His personal feedback for the market report is attached in Appendix 6.

Besides, Pekka Santanen had more than seven years working at FINPRO which is the organization helps Finnish SMEs grow internationally. Therefore, the author was also introduced to Eija Tynkkynen (Commercial Counsellor) and Pham Hoang Kinh (Senior Advisor) who are the key persons at FINPRO Vietnam. Mr. Kinh is the gate opener who helped the author dispatched invitation emails to maritime academies in Vietnam.

Secondly, sources of secondary data are solely from government and administration portal (Vietnam Maritime Administration), maritime academies presentations and articles (Vietnam Maritime University, Maritime College No.1), maritime industry publications, International Maritime Organization (IMO), company's website and news (Image Soft Oy and other local companies).

Thirdly, the primary research was conducted by the author for three weeks in Vietnam. The chosen informers for the interview are both in high management levels or experts in maritime academies such as institution rector, dean of faculty, managing director, maritime lecturers and maritime engineers. They all have thorough understandings of the research problems and work professionally in maritime education or maritime sector. Detailed information of the informers is attached with this thesis in the appendices.

It is noteworthy that personal discussions outside the official meetings brought a lot of new insight to the report and thesis in general. Local companies in Vietnam and few engineer expert have updated the author with the latest news regarding the market outlook, shared difficulties and gave useful advice for both the researcher and the case company. This is important to the author since, during the official meeting, not every topic were discussed nor observed extensively in open manners.

However, during the research process, there are few factors that might impact the research results. The author was not able to reach all selected maritime academies and local companies in Vietnam. Many deny were received for various reasons such as the target informer do not have interest nor have the budget for investment. Therefore, the final results may not present fully the current outlook and potential of the Vietnamese market.

Besides, misunderstanding when dispatching invitation emails happened when most of the maritime academies presumed it is an introduction seminar instead of an interview. Hence, the informer probably could not prepare well for the investigative questions. Differences in report and interview languages caused the author unnatural and unclear interpretation toward the informer. The author's inexperience during the interviews is not presented in this thesis.

#### **5.4 Reflection on learning**

Last but not least, it is beneficial for the author to reflect his learning after completing the research-based thesis. It was executed for the commissioning company with high satisfaction and the author also completed his specialization work placement at the company premise. Throughout that period, the author has learned a lot of knowledge and practical experience.

Needless to say, the learning curve of the author has improved remarkably since the first time he got acquainted with the thesis writing process. He has learned to prepare and to distribute different sections within the thesis evenly and logically. He understood how the theoretical framework and knowledge base work to help identify and design the research questions. Under supervision and guidance of his thesis mentor, the author learned to give persuasive reasons for research design, research methods and also give a critical choice for data collection process. Experience in qualitative research is also achieved effectively by the author, despite the fact that this is his first experience with qualitative research.

Regarding practical experience, the thesis writer has understood the business operation within a small and medium-sized enterprise in Finland. It helps the author adapt himself in the business environment and collaboration with Finnish colleagues. Meanwhile, the international collaboration between FINPRO Vietnam and Image Soft Oy has also brought the author new prospect about helping Finnish SMEs grow in foreign markets.

Last but not least, the new knowledge achievement of maritime training simulators and maritime education in Vietnam has broadened the author's understandings regarding the Vietnamese market and its maritime sector in general. The market research was also the opportunity for him to create contacts and build business relationships in Vietnam. This hopefully may benefit any Finnish SMEs who would like to expand their business related to maritime sector in Vietnam.



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## Appendix 1. Interview template by Image Soft Oy

### 3. Training with simulators/ Huấn luyện với hệ thống mô phỏng


- Do you utilize simulators in training (how many of each)?  
 Trường ứng dụng hệ thống mô phỏng nào trong chương trình huấn luyện?  
☐ Ship handling / Full Mission Bridge  
☐ ECDIS  
☐ DP (Dynamic Positioning)  
☐ GMDSS  
☐ Engine Room  
☐ Fishery specific  
☐ Other, please specify:
- What is the brand(s) of your current ship handling simulator(s)?  
 Trường hiện dùng phần mềm mô phỏng lái tàu nào dưới đây nhà trường đang sử dụng?  
☐ Kongsberg  
☐ Transas  
☐ ARI  
☐ ECA / Sindell  
☐ V Step / Nautis  
☐ Rheinmetall  
☐ Other, pls specify

- Does the ship handling simulator fulfil DNV GL Class A standard?  
 Phần mềm mô phỏng có đáp ứng tiêu chuẩn A DNV GL không?  
☐ Yes  
☐ No
- Are you considering investing in new maritime training simulators?  
 Trường có kế hoạch / ý định đầu tư vào thiết bị phần mềm mô phỏng hàng hải mới không?  
☐ Yes, within 1-2 years  
☐ Yes, within 3 years  
☐ Not decided yet  
 Có, 1-2 năm tới  
 Có, trong 3 năm tới  
 Chưa quyết định  
 Pls specify the simulator type  
 Vui lòng ghi rõ sản phẩm mô phỏng:
- What is your budget level of the planned investment?  
 Mức ngân sách cho kế hoạch đầu tư là bao nhiêu?  
 \_\_\_\_\_
- What is the procurement procedure, how are the suppliers invited to tenders?  
 Quy trình được tiến hành như thế nào? Nhà cung cấp sản phẩm được lựa chọn như thế nào?  
 \_\_\_\_\_  
 \_\_\_\_\_
- Image Soft has a wide range of maritime simulators to offer, would you be interested in learning more on  
 Cty Image Soft cung cấp chuỗi phần mềm mô phỏng hàng hải đa dạng quý trường mong muốn tìm hiểu về:  
☐ Full Mission Bridge Simulator  
☐ Full Mission Bridge Simulator for Arctic Training  
☐ ECDIS Training Simulator  
☐ ARPA Radar Simulator  
☐ Sonar Simulator  
☐ GMDSS Simulator  
☐ DP Simulator  
☐ Other, please specify



## Appendix 2. Final project schedule in Vietnam

<div>  <b>Final Project Schedule in Vietnam</b> </div>						
						Helsinki, 20th November 2015
						Target Interviewee: Maritime Academies & Resellers
						Executive: Kien Pham
						Supervisor: Pekka Santanen
Location	Start date	End date	Duration (days)	Target	Expected time of meeting	
<b>Ho Chi Minh City</b>	28/12/2015	31/12/2015	3			
	28/12			FINPRO Vietnam	14:00-15:00	
	29/12			Ho Chi Minh University of Transport	9:30-10:30	
				Waterway Transport Vocational College No.2	15:00-16:00	
				Southern Crewmanning Center (SCC)	Denied	
	30/12	31/12		VIETNAV Ltd	Denied	
				MARITECH	Denied	
				SAMASER	Denied	
<b>Hai Phong</b>	03/01/2016	06/01/2016	3			
	04/01			Vietnam Maritime University	9:30-10:30	
				Maritime College No.1	14:00-15:00	
				Hai Phong Polytechnic College	Denied	
	05/01			VOSCO Maritime Training Center	14:00-15:00	
				Naval Technical Institute	15:30-16:30	
				D.M.T Joint Stock Company	15:30-16:30	
	06/01	06/01		VIMARU Crew Manning Center (VICMAC)	Denied	
				Immatech - Haiphong	Denied	
<b>Ha Noi</b>	07/01/2016	09/01/2016	2			
	07/01			Consilium Vietnam JSC	14:00-15:00	
				Dong Do Marine	Denied	
<b>Nha Trang</b>	10/01/2016	12/01/2016	2	**Vietnam Naval Academy	Denied	
<b>Business trip</b>			8			

## Appendix 3. List of informer from academies

 <b>HAAGA-HELIA</b> University of Applied Sciences					 <b>Image Soft Oy</b>
					Helsinki, 10th November 2015 Market Research Executive: Kien Pham Supervisor: Pekka Santanen
Name	Faculty	Address	Target Interviewee	Contact Information	Other Supports
Vietnam Maritime University	Faculty of Marine Science	Room 201 - A2 Building - N.484 - Lach Tray Street- Ngo Quyen Dist., Hai Phong	Dean of Maritime Faculty: <b>Dr. Nguyen Manh Cuong</b>	Mr. Cuong Tel: 0904 104179 Email: nmcuong@vmaru.edu.vn	Faculty of Marine Science Tel.: 031-3735355 - Fax: 031-3735355 Email: dhhdkb@vmaru.edu.vn Website: http://nav.vmaru.edu.vn/
Maritime College No.1	Navigation Department	498 Da Nang - Dong Hai - Hai An - Hai Phong	Dean of Maritime Faculty: Master/Captain Nguyen Van Trong <b>Mr. Trần Việt Dũng &amp; Mr. Nguyễn - Foreign Relation Dept.</b> <b>Mr. Trọng - Director from MPTC</b> <b>Mr. Thái Văn Khoa - Head of Faculty</b> <b>Mr. Đình Gia Vinh - Vice Rector</b>	Mr. Trong Tel. 0912 238 348 Email: nmtrong@cdh.edu.vn <b>Mr. Dũng</b> Email: tvdung@cdh.edu.vn	Navigation Faculty - Tel. 0313 750755 Support Lines: 0313 766 739 / 0313 752 417 Skype: luuviethungewd
Ho Chi Minh University of Transport	Faculty of Navigation	Room D.405, Navigation Department, No.2, D3 Street, Ward 25, Binh Thanh Dist, HCM City	Head of Faculty: Prof. Dr. Nguyễn Phùng Hưng Deputy Dean of Navigation Faculty: <b>MSc. Bui Trọng Hùng</b>	Mr. Hùng Tel. 0936 898 079 Email: hung_hh@hcmtrans.edu.vn <b>Mr. Hùng</b> Tel. 0903 762 606 Email: captain.hung@gmail.com	Faculty of Navigation Tel/ Fax: 083.899979 Email: hung_hh@hcmtrans.edu.vn
Waterway Transport Vocational College No.2	Faculty of Navigation	33, Dao Tri Str., Town 3, Phu My Ward, Dist. 7, HCM City	Head of Faculty: Nguyễn Đình Long <b>Dr. Bùi Đình Thiện - Rector</b> <b>Đặng Lợi - Vice Rector</b> <b>Nguyễn Đức Thắng - Trg Phong Dao Tao</b> <b>Trần Văn Sơn - Trg Phong Quan Trí Thiệt Bi</b>	Mr. Long Tel. 0908 459 989 - Email: <b>N/A</b> <b>Mr. Thắng</b> Tel. 0909 937 794 - <b>thangduongthuy@gmail.com</b> <b>Mr. Sơn</b> Tel. 0907 975 030 - <b>tvson2@gmail.com</b>	Faculty of Navigation Tel.: 08.37850931 Email: khoadeukien@duongthuy.edu.vn
Other Training Centers					
VOSCO Maritime Training Center - CHI NHANH C.TY CP VẠN TÀI BIỂN VIỆT NAM - TRUNG TÂM HUẤN LUYỆN THUYỀN VIÊN (VMTC)		215 Lach Tray, phường Đằng Giang, quận Ngô Quyền, Hải Phòng http://www.vosco.vn/vmtc	<b>Nguyễn Tiến Hiếu - Vice General Director</b> <b>Vu Thi Phương Thao - Vice Director</b>	<b>Mr. Hiếu</b> 0913.577.199 vmtc@vosco.vn <b>Ms. Thao</b> 0989 996 283 thaovp2705@gmail.com	Email : vmtc@vosco.vn Điện thoại : (84-31) 3733118 Fax : (84-31) 3731007
Technical Naval Institute Viện Kỹ Thuật Hải Quân			Mr. Hùng Mr. Trung	<b>Mr. Hùng</b> - hung0974@gmail.com <b>Mr. Trung</b> - trungtranmanh@gmail.com	

## Appendix 4. List of informer from potential resellers

 <p><b>HAAAGA-HELIA</b> University of Applied Sciences</p>				<p>Helsinki, 23th November 2015 Market Research Executive: Kien Pham Supervisor: Pekka Santanen</p>
<h3>List of Potential Resellers/Partners in Vietnam</h3>				
Name	Info	Address	Contact Information	Other Supports
D.M.T Joint Stock Company	9g30 Thứ Ba 5/1	Room 104 Sholega Bld, 275 Lach Tray str, Ngo Quyen Dist, Hai Phong  Ho Chi Minh Office: R.102, Hai Huong Bld., 33 Le Quoc Hung, 12 Ward, 4 District, HCM City <a href="http://dmtvietnam.com.vn">http://dmtvietnam.com.vn</a>	HP: Tel: (84) 31 37 333 71 Fax: (84) 31 37 333 70 E-mail: sales@psm.vn/ sales@dmtvietnam.com.vn  HCM: Tel: (84) 8 62616491 - Fax: (84) 8 39430436	
VIETNAV Ltd		76 Hoa Lan st, 2nd ward, Phu Nhuan dist, HCMC <a href="http://vietnav.com.vn/">http://vietnav.com.vn/</a>	Tel: (+84) 08 3517 8032 Fax: (+84) 08 3517 8065	
Consilium Vietnam JSC	14g00 Thứ Năm 7/1	No 4, 118/6 Nguyen Khanh Toan, Dich Vong, Cau Giay, Ha Noi, Vietnam	Name: Nguyen Anh Tuan (John) Telephone: + 84 4 6283 2266 Mobile: + 84 989 664 008	Telefon: + 84 4 6283 2266 Fax: + 84 4 6283 2299 Web: <a href="http://www.consilium.se">www.consilium.se</a>



## Appendix 5. Cover of market report and presentation for Image Soft Oy

# FINAL REPORT

## Image Soft Oy & Vietnamese Market



Market Research Executive:  
KIEN HUU PHAM  
Helsinki, February 10th 2016

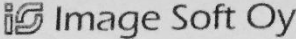
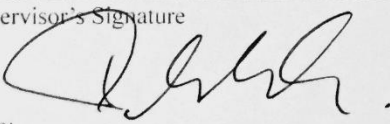
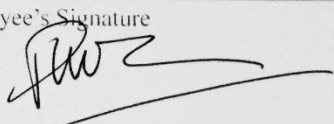


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## Appendix 6. Feedback from Image Soft Oy

		
PERFORMANCE EVALUATION FORM		
Employee Name Kien Huu Pham	Department Marketing	Job Title Market Research Executive
Supervisor's Name Pekka Santanen	Supervisor's Title Vice President, Sales & BD	Period of supervision 26 Oct 2015 – 29 Feb 2016
<b>PERFORMANCE STRENGTHS</b> Describe aspects of performance that were outstanding.		
<b>For employee</b> <ul style="list-style-type: none"> <li>- committed and loyal</li> <li>- self governing, yet social</li> <li>- ambitious and daring</li> <li>- aim for high quality</li> <li>- out of the box attitude</li> </ul>		<b>For the report</b> <ul style="list-style-type: none"> <li>- good scope &amp; focus throughout the project</li> <li>- measurable results with good coverage</li> <li>- door opener, good to continue</li> <li>- report quality meets professional standard</li> <li>- conclusions and recommendations</li> </ul>
<b>AREAS FOR IMPROVEMENT</b> Describe areas where performance could be improved.		
<b>For employee</b> Kien is a fine young man and Vietnam can surely utilize his professional expertise in the future. For a young person the credibility has to be earned, and in some interviews this may have influenced the reception. This however does not show in his report. as Kien's attitude compensated well over his inexperience.		<b>For the report</b> In spite of my serious attempts to find some improvement points I must say that the work was well planned and the report well designed. I have been serving business & market development industry for many years, and this report beats many professional ones in terms of focus, structure and value for the subscriber.
<b>OVERALL PERFORMANCE RATING</b> In the Comments section briefly state the reason for the overall rating, taking into consideration the ratings and specific examples cited for key areas of responsibility and individual performance objectives. Also, exceptional circumstances that had an impact on results should be taken into account.		
<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <input type="checkbox"/>              Did not meet Expectations           </div> <div style="text-align: center;"> <input type="checkbox"/>              Short of Expectations           </div> <div style="text-align: center;"> <input type="checkbox"/>              Met Expectations           </div> <div style="text-align: center;"> <input type="checkbox"/>              Exceeded Expectations           </div> <div style="text-align: center;"> <input checked="" type="checkbox"/>              Far Exceeded Expectations           </div> </div>		
<b>COMMENTS:</b>  		
Supervisor's Signature  Date: 12.2.2016		Employee's Signature  Date: 22.2.2016